VTECH ENERGY SOLUTIONS INC.

# HIGH VOLUME BLOWER COMPRESSOR TRIAL

INNOVATIVE IDEAS IN ENERGY EFFICIENCY

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# HIGH VOLUME BLOWER COMPRESSOR TRIAL

- Customer X and V-Tech Energy Solutions Agreed to a Three Month Trial of the HVBC on a Customer Location
- Specifically Targeting The Well For Energy Utilization And Production
- The Following Bench Marks Were Documented

**TARGETS**

- ✓ Increased Production
- ✓ Decreased Chemical
- ✓ Fuel Consumption
- ✓ Consistent Temperature Management

** The following Data has been provided by Customer Sources*

# BLOWER COMPRESSORS

## HVBC MINI

- Hydraulic Or Electrically Driven
- VRU, Booster Compressors, Eliminate Propane Usage On Site
- Up To 14.9 PSI Outlet Pressure @Max RPM

## HVBC

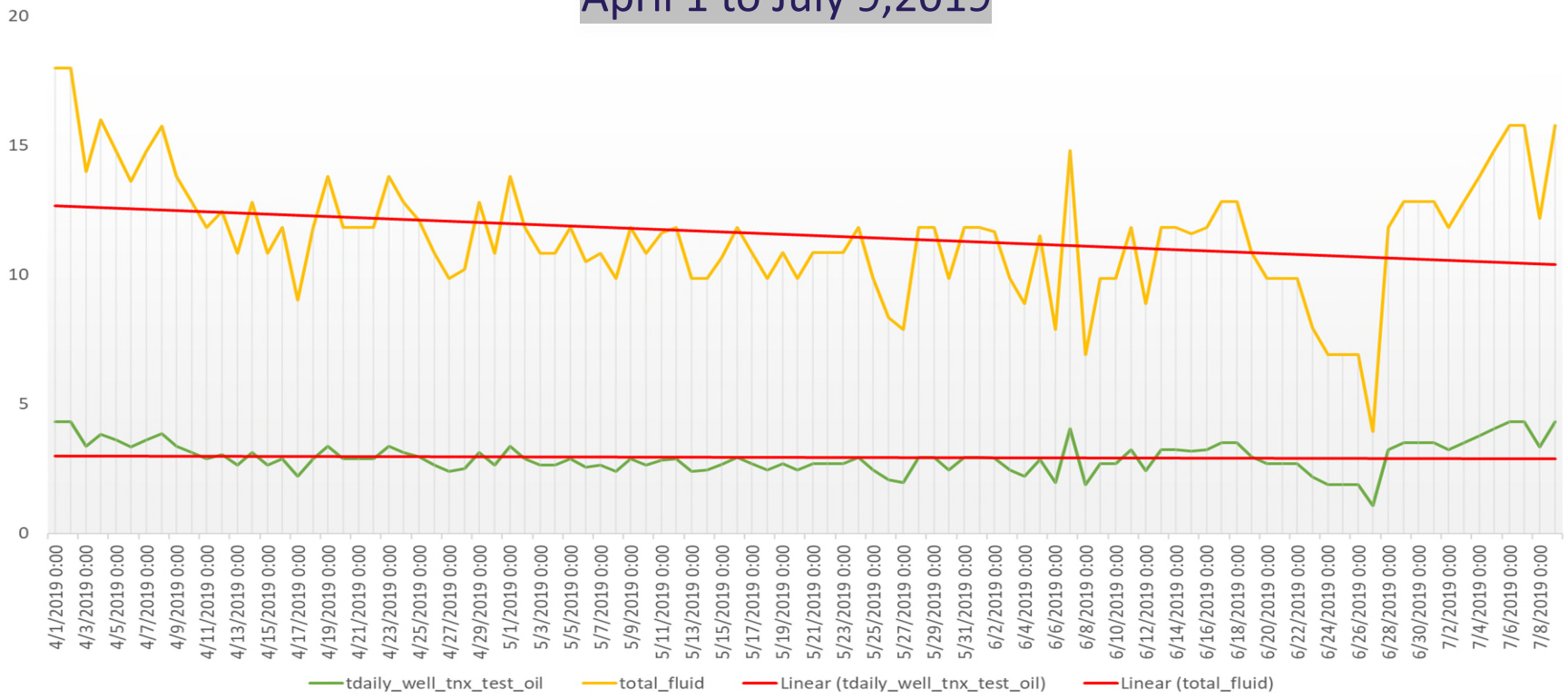
- Small Footprint Structure

- Pre Filter Assembly
- Inlet Scrubber

# PRODUCTION HISTORY
## APRIL 9/19 TO JULY 9/19



April 1 to July 9,2019




- ✓ HVBC Installed on July 10/19
- ✓ Historic Trends Show Declining Production for Three Months Prior to Installation
- ✓ Average Oil Production of 2.86 $M^3$/ Day

# PRODUCTION HISTORY
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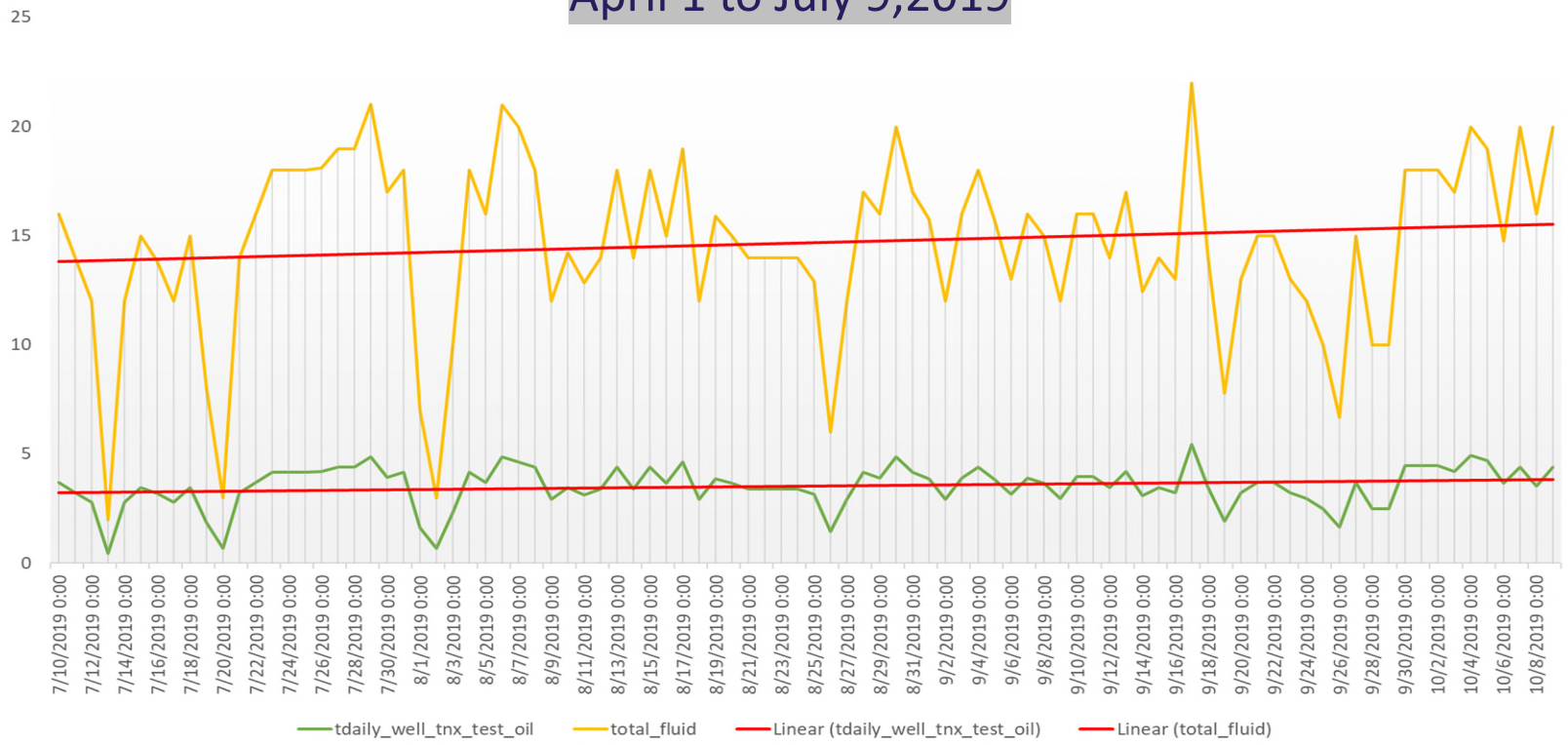


- ✓ Historic Trends Show Increasing Production for Three Months Post Installation
- ✓ An Average of 3.63 M³/Day in the Last Month of the Trial - And An Average of 4.32 M³/Day in the Last 10 Days of Analysis.
- ✓ Difference: 4.32-2.86 = 1.46 M³/Day of Increased Production
- ✓ **Return: 1.46 m3/day x $248.00/M³= $367.04/ day or Approximate *$11,000.00 per Month***

# RESULTS




**= $11 K / MONTH**

Increased Production

of Approximately

1.5M³/Day


**= $135 / MONTH**

Decreased Chemical

of Approximately

1 L / Day


**= PEACE OF MIND**

Maintained at the

Burner of 80°C


**= PAYOUT OF THE MINI AT $20K IS 1.8 MONTHS**

**= PAYOUT OF THE HVBC COMPLETE AT $32.5K IS 2.9 MONTHS**

- *Customer X and V-Tech Energy Agreed to a Three Month Trial of the HVBC Specifically Targeting the Well for Energy Utilization and Production*
- *The Following Bench Marks Were Documented*

# TESTIMONIALS – PREVIOUS STUDIES



## Case Study #1 -

- High Volume Blower Compressor System was installed on a well that was venting and could not be controlled by pinching back the casing valve, county gas was being used for fuel gas on the site. The casing pressure was pulled down to 1 .5 PSI while maintaining 10-12 PSI on the fuel gas tree and the well production stabilized. Over a three month period the county gas system did not have to be used and the result was a savings of $9,000 per month or $27,000 in 3 months. This equates to **$108,000** per year in savings if all variables remain the same

## Case Study #2 -

- High Volume Blower Compressor System installed on a well that was carrying a steady 4.5 PSI on the casing which was not enough to effectively balance fluid level versus fuel gas use. By installing the HVBC, the casing gas pressure was reduced to 1.5 PSI and allowed for 8 PSI on the fuel gas tree. The propane costs were eliminated. In addition, the well produced an additional 2.1 $M^3$ of oil per day over the next month with increased inflow due to less casing pressure. The fluid level increased by 4-5 joints during this time. In this case if all variables remain the same a propane cost of **$48,000** per year will be eliminated and, as an added bonus, an increase in revenue from the additional oil production.

# SUMMARY



**ECONOMICAL** → **VERSTATILE** → **PRACTICAL SOLUTION** → **COST EFFECTIVE**

Economical Technology to Capture **100%** of All Vent Gas on CHOPS Sites and Other Facilities

HVBC Can Be Used Strictly As A VRU System Or As A Complete Well Recovery System

Producers Can Increase Production And Eliminate Propane Usage On Site

Most Systems Realize Under Three **(3)** Month Payback For Producers, Some As Low As Three **(3)** Weeks